

REMARKS

Claim 19 has been has been amended to obviate the Examiner's objections. Claims 58 and 61have been amended to clarify the subject matter of the claimed invention. Claim 60 has been amended to employ correct Markers listings. No new matter has been added.

The art rejections are respectfully traversed. Considering the Examiner's rejections under § 102(b), claim 58 has been amended to require that "each actuator comprises a reversibly responsive elastomeric material." The Examiner admits (in the Office Action dated July 1, 2009) that neither Culp nor da Costa teach this feature. Thus, neither Culp nor da Costa, either alone or in combination, can achieve or render obvious claim 58 or any claim depending thereon.

Turning the Examiner's rejection of claims 2, 3, 15, 17, 19-21, 24-26 and 58-61 under § 103(a) as being obvious from da Costa in view of Chinn, independent claim 58 requires "a plurality of individual actuators arranged *contiguously* in a series." The combination of Chinn and da Costa does not teach this. The Examiner, in the Office Action dated July 1, 2009, cites Chinn for teaching the use of an elastomeric material as a valve actuator, and submits that Chinn and da Costa may be combined to achieve the present invention by substituting the structure of Chinn for each individual actuator of da Costa. However, substituting the structure of Chinn does not achieve the claimed invention, particularly where the individual actuators are required to be arranged contiguously. Chinn teaches the inclusion of a plenum through which inlet and outlet channels bring the fluid into contact with the actuator, which functions as a valve. An arrangement of the structure of Chinn in series, as suggested by the Examiner, would require inlet channels and outlet channels to be placed between a series of individual chambers and would not approximate a plurality of individual actuators arranged contiguously

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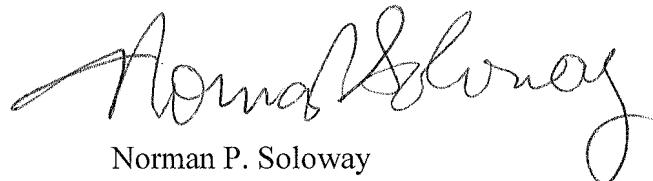
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in a series as required by claim 58. The Examiner provides no rationale by which Chinn might be otherwise modified to achieve the claimed invention.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Entry of the foregoing Amendment and allowance of the Application are respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391

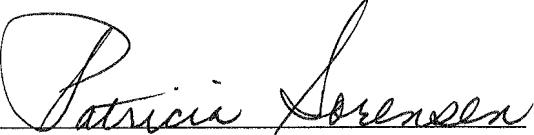
Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Patent Office via the electronic filing procedure on March 29, 2010.

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